

Amendments to the Claims

Please cancel Claims 2, 3 and 45. Please amend Claims 1, 8, 9, 11-15, 18-22, 24 and 29-34. Please add new Claim 53-58. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1. (Currently Amended) A compound comprising a target specific portion and an effector portion wherein:

- (i) the target specific portion comprises ~~or consists of~~ a monoclonal antibody having specificity for oncofoetal fibronectin, or a fragment or variant thereof which retains the binding specificity for oncofoetal fibronectin of the parent monoclonal antibody; and
- (ii) the effector portion comprises ~~or consists of~~ interleukin-12, or a functional fragment or variant thereof;

~~characterized in the monoclonal antibody having specificity for oncofoetal fibronectin binds to a region of oncofoetal fibronectin other than the ED-B region~~

wherein the target specific portion is capable of binding an amino acid sequence within the repeat 7 domain of fibronectin.

2-3. (Cancelled)

4. (Previously Presented) A compound according to Claim 1 wherein the target specific portion is specific for human oncofoetal fibronectin.

5. (Previously Presented) A compound according to Claim 1 wherein the monoclonal antibody having specificity for oncofoetal fibronectin is a BC1 antibody, or an antibody capable of competing with the binding of a BC1 antibody to oncofoetal fibronectin.

6. (Original) A compound according to Claim 5 wherein the monoclonal antibody having specificity for oncofoetal fibronectin is a BC1 antibody.

7. (Previously Presented) A compound according to Claim 1 wherein the monoclonal antibody is a human or humanized antibody.
8. (Currently Amended) A compound according to Claim ~~[[6]]~~ 7 wherein the compound binds to oncofoetal fibronectin more tightly than the parent monoclonal antibody.
9. (Currently Amended) A compound according to Claim 8 wherein the compound binds to oncofoetal fibronectin ~~more~~ at least 2-fold tighter than the parent monoclonal antibody.
10. (Previously Presented) A compound according to Claim 8 wherein the compound binds to oncofoetal fibronectin at least 10-fold tighter than the parent BC1 antibody binds to oncofoetal fibronectin.
11. (Currently Amended) A compound according to Claim 1 wherein the target specific portion comprises ~~[[a]]~~ the polypeptide of SEQ ID NO: 1.
12. (Currently Amended) A compound according to Claim 1 wherein the target specific portion comprises ~~[[a]]~~ the polypeptide of SEQ ID NO: 2.
13. (Currently Amended) A compound according to Claim 11 wherein the target specific portion comprises ~~[[a]]~~ the polypeptide of SEQ ID NO: 1 and ~~[[a]]~~ the polypeptide SEQ ID NO: 2.
14. (Currently Amended) A compound according to Claim 1 wherein the target specific portion comprises ~~or consists of~~ an antigen binding fragment of a monoclonal antibody having specificity for oncofoetal fibronectin.
15. (Currently Amended) A compound according to Claim 14 wherein the target specific portion comprises ~~or consists of~~ a FAB-like molecule as an antigen binding fragment ~~selected~~

~~from the group consisting of FAB-like molecules, such as Fab and F(ab')₂, Fv molecules, disulphide-linked Fv molecules, ScFv molecules and single domain antibodies (dAbs).~~

16. (Previously Presented) A compound according to Claim 1 wherein the target specific portion comprises one or more antibody constant regions.

17. (Original) A compound according to Claim 16 wherein the one or more antibody constant regions comprises or consists of a CH1 domain.

18. (Currently Amended) A compound according to Claim 1 further comprising an [[Fe]] Fc moiety.

19. (Currently Amended) A compound according to Claim 18 wherein the [[Fe]] Fc moiety ~~is derived from~~ comprises the CH2 and CH3 domains of a heavy chain constant region of a human IgG₁.

20. (Currently Amended) A compound according to Claim 1 wherein the target specific portion comprises ~~or consists of~~ a whole BC1 antibody.

21. (Currently Amended) A compound according to Claim 1 wherein the effector portion comprises ~~or consists of~~ human interleukin-12, or a functional fragment or variant thereof.

22. (Currently Amended) A compound according to Claim 1 wherein the effector portion comprises ~~or consists of~~ a single-chain interleukin-12.

23. (Previously Presented) A compound according to Claim 22 wherein the single chain IL-12 consists of an IL-12p35 domain and an IL-12p40 domain.

24. (Currently Amended) A compound according to Claim 23 wherein the IL-12p35 domain is conjugated to the IL-12p40 domain by [[a]] at least one disulphide bond.

25. (Previously Presented) A compound according to Claim 1 wherein the compound is a fusion protein.
26. (Previously Presented) A compound according to Claim 1 wherein the target specific portion is fused to the effector portion.
27. (Original) A compound according to Claim 26 comprising an immunoglobulin heavy chain fused to the effector portion.
28. (Original) A compound according to Claim 27 wherein the immunoglobulin heavy chain and the effector portion are joined via a mutated linker sequence.
29. (Currently Amended) A compound according to Claim 28 wherein the linker comprises ~~or consists of~~ the amino acid sequence ATATPGAA (SEQ ID NO: 5).
30. (Currently Amended) A compound according to Claim 1 wherein the compound comprises ~~the~~ the polypeptide of SEQ ID NO: 6.
31. (Currently Amended) A compound according to Claim 1 wherein the compound comprises ~~the~~ the polypeptide of SEQ ID NO: 7.
32. (Currently Amended) A compound according to Claim 30 wherein the compound comprises ~~the~~ the polypeptide of SEQ ID NO:6 and ~~the~~ the polypeptide of SEQ ID NO:7.
33. (Currently Amended) A compound according to Claim 30 further comprising ~~the~~ the polypeptide of SEQ ID NO:4 linked by at least one disulphide bond to the polypeptide of SEQ ID NO:6.

34. (Currently Amended) A ~~fusion-protein~~ compound of Claim 1, where the target-specific region comprising comprises antibody V regions directed against oncofoetal fibronectin, and an [[Fe]] Fc moiety, and the effector portion comprises an interleukin-12 moiety.

35-42. (Canceled)

43. (Previously Presented) A pharmaceutical composition comprising a compound according to Claim 1 and a pharmaceutically acceptable carrier.

44. (Original) A pharmaceutical composition according to Claim 43 wherein the composition is suitable for parenteral administration.

45-46. (Cancelled)

47. (Withdrawn) A method of treating a patient with cancer, the method comprising administering a compound according to Claim 1 to said patient.

48. (Withdrawn) The method according to Claim 47 wherein the mammal is a human.

49. (Withdrawn) The method according to Claim 47 wherein the patient has a solid tumor.

50. (Withdrawn) The method according to Claim 47 wherein the cancer is a glioblastoma.

51-52. (Canceled)

53. (New) A compound according to Claim 14 wherein the target specific portion comprises an antigen binding fragment selected from the group consisting of Fab, F(ab')₂, Fv molecules, disulphide-linked Fv molecules, ScFv molecules and single domain antibodies (dAbs).

54. (New) A compound according to Claim 1 wherein the monoclonal antibody is a humanized murine BC1 antibody.
55. (New) A compound according to Claim 1, wherein:
the target specific portion comprises:
the polypeptide of SEQ ID NO: 1; and
the polypeptide of SEQ ID NO: 2; and
the effector portion comprises:
an IL-12p35 domain; and
an IL-12p40 domain conjugated to the IL-12p35 domain by at least one disulphide bond;
and wherein the target specific portion is fused to the effector portion via the linker sequence that comprises the amino acid sequence ATATPGAA (SEQ ID NO: 5).
56. (New) A compound according to Claim 1, wherein:
the target specific portion comprises:
the polypeptide of SEQ ID NO: 1; and
the polypeptide of SEQ ID NO: 2;
the effector portion comprises:
the polypeptide of SEQ ID NO: 3; and
the polypeptide of SEQ ID NO: 4 conjugated to SEQ ID NO: 3 by at least one disulphide bond;
and wherein the target specific portion is fused to the effector portion via the linker sequence that comprises the amino acid sequence ATATPGAA (SEQ ID NO: 5).
57. (New) A compound according to Claim 1, comprising:
the polypeptide of SEQ ID NO: 6;
the polypeptide of SEQ ID NO: 7 conjugated to the polypeptide SEQ ID NO: 6 by at least one disulphide bond; and

the polypeptide of SEQ ID NO: 4 conjugated to the polypeptide SEQ ID NO: 6 by a disulphide bond.

58. (New) A compound comprising a target specific portion and an effector portion wherein:
- (i) the target specific portion comprises a monoclonal antibody having specificity for oncofoetal fibronectin, or a fragment or variant thereof which retains the binding specificity for oncofoetal fibronectin of the parent monoclonal antibody; and
 - (ii) the effector portion comprises the polypeptide of SEQ ID NO: 4 and the polypeptide of SEQ ID NO: 3;
- and wherein the target specific portion is capable of binding an amino acid sequence within the repeat 7 domain of fibronectin.